THE BEDROOM: AN EXPOSURE SOURCE FOR POLYBROMINATED FLAME RETARDANTS (PBDEs) IN INFANTS?

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Polybrominated diphenyl ethers (PBDEs) are compounds added as flame retardants in a variety of household items including polyurethane foams (PUFs) and textiles. Previous studies have shown that infants and children have substantially higher serum PBDE concentrations than the adult population, and the concern is that children may experience different exposures to chemicals than adults. The use of flame retardants in PUFs in mattresses and in textiles not only contributes indirectly to the indoor environment, but are also often in direct dermal contact with the infant, and because of mouthing behaviours, children have higher exposure to chemicals through non-dietary ingestion than adults.

The aim of this study was to (1) establish a rapid methodology for assessing the use of PBDEs in textiles and other products with dermal contact to the infant; and (2) to apply the method for an initial pilot study to monitor the use of PBDEs in PUF mattresses and in infant and children’s clothing commercially available in Australia. The results of the pilot study will be presented, as well as an overview of how this study fits into the scope of a larger project in assessing chemical body burden of infants and young children in Australia.